

**Notice of Allowability****Application No.**

10/527,914

**Examiner**

JUNCHUN WU

**Applicant(s)**

HELLER ET AL.

**Art Unit**

2191

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Appeal Brief filed on 12/16/2009.
2. ☒ The allowed claim(s) is/are 21, 24-29, 31-36, and 38.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 9/15/2008 & 6/20/2005.

### DETAILED ACTION

1. Applicant's filing appeal brief dated Dec. 16, 2009, responds to the advisory action mailed Sept. 22, 2009 provided in the rejection of claims 21, 24-29, 31-36 and 38.

### EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Ms. Janet D. Hood (Reg. No. 61,142) and Tina Gonka on 3/5/2010 to place the claims in the condition for allowance.

3. The application has been amended as following:

In the claimed list filed on 09/03/2008, please amend claims 21, 24, 25, 26, 28, 29 and 34 as following:

- Claim 21,

A non-transitory storage medium which stores a software system for providing a programming environment to create device-independent functionality among automation devices in an automation system of the type including a plurality of automation devices, the system comprising:

one or more automation engineering editors for generating ~~solutions~~ an automation program for multiple ones of the automation devices;

a compiler for translating the ~~solutions~~ automation program into an intermediate language in a runtime framework for further translation into different instructions for automation devices in different automation systems; and

an automation device-specific adapter for each of the automation devices, each adapter providing a translation of ~~a solution~~ the automation program into instructions which can be interpreted by an automation device in a different automation system, the software system providing encapsulation of specific functions of the automation devices and providing a base functionality of the one-automation devices, the editors and compiler providing an automation functionality in a standard framework for application among automation devices having different command sets for being programmed.

▪ Claim 24,

The non-transitory storage medium according to claim 21, wherein the software system is provided for developing control software in the automation system.

▪ Claim 25,

The non-transitory storage medium according to claim 21, wherein the software system provides technological objects for automation devices and, when the system includes m editors and n automation devices, at most, only  $n + m$  compilers are required to implement the ~~solution~~ automation program.

▪ Claim 26,

A system including the non-transitory storage medium according to claim 21, further comprising: a memory for storing automation ~~solutions~~ programs for recurring tasks.

▪ Claim 28,

The non-transitory storage medium according to claim 21, wherein an automation-specifically designed programming language is used for developing control software for the automation system.

▪ Claim 29

A method for providing device-independent functionality for automation devices, the method comprising:

providing a compiler for receiving ~~solutions~~ an automation program from one or more automation engineering editors and translating the ~~solutions~~ automation program into an intermediate language in a runtime framework for further translation into different instructions for automation devices in different automation systems: and

providing an automation device-specific adapter for each of the automation devices, each adapter providing a translation of ~~a solution~~ the automation program from the intermediate language into instructions which can be interpreted by an automation device in a different automation system, the software system providing encapsulation of specific functions of the automation devices, the editors and compiler providing an automation functionality in a standard framework for application among automation devices having different command sets for being programmed.

▪ Claim 34,

The method according to claim 29, further comprising: storing automation ~~solutions~~ programs for recurring tasks.

***Allowable Subject Matter***

4. Claims 21, 24-29, 31-36 and 38 are allowed.
5. The following is an examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fails to suggest

"A non-transitory storage medium which stores a software system for providing a programming environment to create device-independent functionality among automation devices in an automation system of the type including a plurality of automation devices, the system comprising: a compiler for translating the automation program into an intermediate language in a runtime framework for further translation into different instructions for automation devices in different automation systems; and an automation device-specific adapter for each of the automation devices, each adapter providing a translation of the automation program into instructions which can be interpreted by an automation device in a different automation system, the software system providing encapsulation of specific functions of the automation devices and providing a base functionality of the one-automation devices, the editors and compiler providing an automation functionality in a standard framework for application among automation devices having different command sets for being programmed.", as recited in independent claim 21 and similarly recited in independent claims 29. Claims 24-28; 31-36 and 38 are considered allowable by virtue of their dependence on allowable independent claims 21, and 29 respectively.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JUNCHUN WU whose telephone number is (571)270-1250. The examiner can normally be reached on 8:00-16:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Zhen can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191